

Narrative Inquiry Into the Learning Process of Visual Art Learners With Color Vision Deficiency

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Summary

Colors exist naturally in illuminated environments. People experience and feel colors in daily life without thinking about their meaning. However, people exhibit different sense of colors in various cultural contexts. Artists express colors with their subjective emotional minds, which results in personal styles. People with color vision deficiency have normal sight, and it does not affect their life. Furthermore they do not fall into any handicapped category, and do not need to attend any special education, just as if they were normal sighted. Therefore, they cannot be easily detected in school, and encounter many challenges in art classes. The prevalence rate is 4%–8% among men, much higher than 0.2%–0.5% of women. This proportion indicates that people with color vision deficiency exist at different stages of educational settings, yet are hardly noticed even in visual art classes; of course, this special population seldom have chances to discuss how to learn better if there are students interested in art. Moreover, learning problems caused by deficient color perception might be directly identified as learning problems. This study invited two participants with color vision deficiency who attended art-gifted classes during at least one of the educational stages, earned undergraduate degrees in art, and eventually won a master's degrees in art. Obviously, both successfully conquered their problems with color perception when learning visual art. This study aimed to examine how they found their interest and aptitude when they were young without knowing they had a vision problem, how they learnt art when facing the challenges of colors and how they adjusted, and finally how they decided to continue pursuing a

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professional career in visual art and became advanced art professionals either in art education or art making.

It is much more difficult for people with color vision deficiency compared to others to pursue realistic art skills, and during eye exams optometrists would usually advise them not to major in visual arts for a long-term career development. However, Zaidel (2015) stated that art is one of the most complicated mental activities from the perspective of neuroscience; thus, to make art, visual function is not the only relevant element; cognitive ability, eye–hand coordination, emotional expression, decision making, and problem solving are also vital. This reminds us that the ability to perceive colors does not affect the creative mind. In contrast, artistic problem-solving skills may help art students with color vision deficiency organize their color palettes to their own convenience, substitute ways of creating art, or invent new artistic styles. Eye disease sometimes not only influences vision, but also distorts the identification of colors. Some pathological reasons show that artists will make progress even after eye diseases, such as cataract or myopia. Artists normally find their familiar skills for their individual techniques far before these problems occur; therefore, they are mostly able to mitigate their eye problems so that they do not affect them significantly (Trevor-Roper, 1957). For example, Claude Monet got cataracts, which caused problems in visual ability and color perception, but he still painted wonderful lily ponds in vague scenes emphasizing blue and purple. As color vision deficiency is hereditary, it is true that few could become artists, especially painters. However, talented artists can overcome such problems, choose proper art materials, and develop a mature style. American sculptor Paul Manship realized his color perception was different when he was very young, so he created sculptures. Another American sculptor, Daniel Arsham, was born with color vision deficiency and used black, white, and gray as major colors for his artworks that are full of unusual emotions. French artist Charles Meryon who suffered from color blindness, worked in black and white etching, and Australian protanopia artist Clifton Pugh worked with printmaking as well. Latvian artist Andris Breze stated color vision deficiency is not a deficiency, but a way of being exceptional, and has used different materials to create installation art. All these examples demonstrate that color vision deficiency does not deter one from becoming an artist.

The Asian art world of art shows no indications of any artists with color perception problems. This may relate to the Oriental materials (mainly, black ink), which is a friendly material for artists with color vision deficiency. Black and white literati paintings use shades of gray; successful ink expression would be identified as “five colors of ink.” Moreover, in calligraphy, black is mainly used, which emphasizes more the form of lines than colors. Of course, there are Chinese painting

artists or calligraphers who had vision problems caused by aging. Thus, the famous Chinese painter Chang Dai-Chien drew splash ink landscapes, a method similar to automatism, because of the regression of his vision, yet, this became his famous style in old age.

In summary, artists with color vision deficiency would adjust when creating art learning experiences, organizing colors in a personal palette, choosing black and white as major colors, developing personal artistic styles, and so on. To explore research questions, understanding the related issues of how color vision deficiency affects visual art learning, this study used in-depth interview, and holistic-content as data analysis model obtained from narrative inquiry. Finally, it ends with chronicle context composition.

The two participants, Kaiying and Minhong, share many similarities. None of their family members studied art, and they have not been diagnosed with problematic color perception, showed high interest and aptitude when they were very young, and therefore were sent to art classes to facilitate their art potential, without realizing they had a hereditary disorder, red-green color blindness. Their families supported them, so even after they were diagnosed with color vision deficiency in early elementary school, Kaiying still decided to take an exam for the art-gifted class, but Minhong could not as there were no such classes in the area. Winning the first place in children art competition was the important reason for Kaiying to study visual art, and about the same age, Minhong continued learning in a private art studio. They had no issues with visual art learning in the elementary school until they practiced mixing watercolors and realistic technique. They both experienced anxiety about personal health. However, they were unable to convey such feelings to anyone, even their family members, and they asked their peers to help choose correct colors without letting their art teachers know. To get into a better public school, they both passed an entrance exam and attended art-gifted classes in junior high school. They continued to work hard in art classes but always were frustrated when learning watercolor. Still, art teachers in both the first-ranking junior high school and private art studios encouraged them to develop personal color styles. Regardless of realistic color application, both of them were good at charcoal or pencil drawing, Chinese painting and calligraphy, but disliked watercolor. In college and graduate school, color vision deficiency did not annoy them anymore, and majoring in Oriental art, they both knew that artistic creativity has many forms.

According to the results, personal interest and aptitude were the main reasons leading to the visual art professional learning, and to get into a better public school, so trying to pass the exams for art-gifted students, they even needed to tolerate emotional reactions to difficulties. While learning, they found their own way to adjust, such as establish personal color organization, select

proper art materials, and create personal styles. After overcoming challenges, they understood their strengths and limitations, and were able to become advanced visual art professionals, Kaiying majoring in art and Minhong majoring in art education. This study suggest the following: Visual art teachers should develop curriculums using various materials for different creative experiences, demonstrating dissimilar styles are not limited by realistic forms, and help gifted students with color vision deficiency to realize personal strengths and limitations when considering future career development. Moreover, art teachers may require continuing education to better understand students with special needs.